CLAIMS

What is claimed is:

1. An apparatus comprising:

5   a synchronous optical network (SONET) framer;

a frame dimension unit; and

a programming interface, said frame dimension unit to be programmed with a frame dimension through said programming interface, and said SONET framer to convert a data stream to and/or from a frame format based on the frame dimension

10 programmed into the frame dimension unit.

2. The apparatus of claim 1 wherein the frame dimension unit comprises a plane counter, a row counter, and a column counter.

15 3. The apparatus of claim 2 wherein at least one of the plane counter, the row counter, and the column counter is programmable.

4. The apparatus of claim 1 wherein the programming interface comprises at least one of a data bus and one or more dip switches.

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5. The apparatus of claim 1 wherein the frame dimension comprises a programmable number of planes per frame.

6. The apparatus of claim 5 wherein the SONET framer supports a plurality of standard SONET data rates corresponding to particular values of the programmable number of planes.

5   7. The apparatus of claim 5 wherein the SONET framer supports a range of data rates corresponding to particular values of the programmable number of planes.

8. The apparatus of claim 1 wherein the frame dimension comprises at least one of a programmable number of rows per frame and a programmable number of columns per 10   frame.

9. The apparatus of claim 8 wherein the SONET framer supports a range of data rates corresponding to at least one of the programmable number of rows and the programmable number of columns.
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10. The apparatus of claim 1 wherein the apparatus comprises a simulation environment, and wherein the frame dimension is programmed to achieve a data rate supported by the simulation environment.

20   11. The apparatus of claim 10 wherein the simulation environment comprises at least one of a software simulator and a hardware emulator.

12. The apparatus of claim 1 further comprising:

a simulation environment interface to couple the apparatus to a simulation environment, said frame dimension to be programmed to achieve a data rate supported by the simulation environment.

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13. The apparatus of claim 11 wherein the simulation environment comprises at least one of a software simulator and a hardware emulator.

14. The apparatus of claim 1 further comprising:

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a logic analyzer interface to couple the apparatus to a logic analyzer, said frame dimension to be programmed to achieve a volume of data per frame supported by the logic analyzer.

15. A method comprising:

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programming a frame dimension unit with a frame dimension through a programming interface of a synchronous optical network (SONET) framer; and

converting a data stream to and/or from a frame format with the SONET framer based on the frame dimension programmed into the frame dimension unit.

20   16. The method of claim 15 wherein programming the frame dimension unit comprises:

setting a number of planes per frame.

17. The method of claim 16 wherein the number of planes corresponds to one of a plurality of standard SONET data rates supported by the SONET framer.

18. The method of claim 15 wherein programming the frame dimension unit comprises
at least one of:

      setting a number of rows per frame; and

      setting a number of columns per frame.

19. The method of claim 15 wherein the number of rows and/or number of columns correspond to one of a range of data rates supported by the SONET framer.

20. A machine readable medium having stored thereon machine executable instructions that when executed implement a method comprising:

      programming a frame dimension unit with a frame dimension through a programming interface of a synchronous optical network (SONET) framer; and

      converting a data stream to and/or from a frame format with the SONET framer based on the frame dimension programmed into the frame dimension unit.